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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Yun Namkoong

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EXAMINER

DANG, HUNG Q

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/797,384	Applicant(s) NAMKOONG ET AL.	
	Examiner Hung Q. Dang	Art Unit 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 February 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5,7-9,12-14,16 and 18-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5,7-9,12-14,16 and 18-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 02/17/2009 have been fully considered but they are not persuasive.

On page 9, quoting paragraphs [0015] and [0017] of Ito, Applicant argues that, "Ito also teaches away from a retry of reading or writing of the data being performed with one of the required time period or the predetermined maximum number of retries after the step of determining the type of data and in both cases of the data being and not being of the predetermined type of data." In response, the Examiner respectfully disagrees. First of all, Ito clearly teaches for the type of data that is characterized with reading-out or recording reliability being more important (D-data in [0067]), retrying processing, as illustrated following the branch "NO" of step B15 in Fig. 3, is performed (see [0015]). Otherwise, if the data is determined as of type whose continuity is more important (AV data in [0057], [0058], and [0069]) the retrying processing is not performed following the branch "YES" of step B15 in Fig. 3 to save processing time. But nowhere in Ito reference is found to state that for that type of data or AV data, retrying processing cannot be performed. Therefore, obviously Ito implies that retrying process for AV data is optional and if users want to implement a retrying process for AV data, they can spend extra processing time to do that. Hirata, in column 9, lines 1-5, clearly suggests for AV data, retrying process is performed with a maximum required time period. Hirata further discloses that such a retrying process is performed as illustrated in Fig. 6.

Therefore, one of ordinary skill in the art at the time the invention was made would have been motivated to modify the teachings of Ito et al. by the retrying process in reading or recording of AV data as disclosed by Hirata et al. instead of having the process omitted like Ito does. The modified feature would also enhance the recordability or readability of the AV data even in case of errors as well.

Further, Ito clearly discloses that the retrying process with the predetermined maximum number of retries is performed after the step of determining the type of the data (step B15 is performed before the retrying process is executed following the "NO" branch as shown in Fig. 3). It is also to emphasize that step B15 is used to determine the type of the data as further described in [0066] and [0069]. Obviously, if Hirata is incorporated into Ito to perform retrying process for AV data, the retrying process should be executed after step B15 is performed. As such, it should be following the "YES" branch of Fig. 3 of Ito.

Specifically, the process proceeds as follows: at step B15 of Ito, the data can be detected as either D-data, whose reliability is more important (see [0067]), or AV data, whose continuity is more important (see [0069]). If it is of D-data, the retrying process with predetermined maximum number of retries is performed as shown in the control flow following the "NO" branch of step B15 in Fig. 3 of Ito. Otherwise, it is determined as AV data, and the retrying process with required time period as disclosed and suggested by Hirata would follow the "YES" branch of step B15 of Ito.

For those reasons, the combination of Ito and Hirata is appropriate and discloses all limitations of the claim in contrast with Applicant's arguments stated on pages 7-8.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3, 5, 8-9, 12, 14, 16, and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al. (US 2001/0038704) and Hirata et al. (US 6,625,755).

Regarding claim 1, Ito et al. disclose a method of retrying reading or writing of data (Fig. 3), comprising: determining whether the data is a predetermined type of data ("step B15" in Fig. 3); not retrying reading or writing only if the data is a predetermined type of data ("yes" branch at "step B15" in Fig. 3); (C) determining a total count of retries for the reading or writing of the data ("set value" in Fig. 3); (D) performing another retry if the total count of retries is not greater than a predetermined maximum number of retries ("step B17" and "step B20" in Fig. 3); (E) terminating retrying of reading or writing of data if the total count of retries is greater than the predetermined maximum number of retries ("step B20", "step B21", and "End step" in Fig. 3); and performing steps C, D, and E only if the data is not the predetermined type of data ("step B15" in Fig. 3); and not performing the C, D, and E if the data is the predetermined type of data ("Yes" branch at "step B15" in Fig.3); wherein a same order of retry types is followed when the data is not the predetermined type (Fig. 3); and wherein a retry of reading or writing of the data with the predetermined maximum number of retries in step D is performed after the step

of determining the type of data and in case of the data not being the predetermined type of data (Fig. 3; [0066]-[0069]; also see “Response to Arguments above”) and omitting the retrying process after the step of determining the type of data and in case of the data being the predetermined type of data (Fig. 3; [0066]-[0069]; also see “Response to Arguments above”).

However, Ito et al. do not disclose (A) determining a required time period for performing a retrying type of reading or writing of the data; (B) terminating retrying of reading or writing of the data if the required time period is greater than a remaining retrying limitation time; determining whether the data is a predetermined type of data; performing the steps A and B only if the data is the predetermined type of data; wherein a same order of retry types is followed according to a retry table when the data is the predetermined type and when the data is not the predetermined type.

Hirata et al. disclose (A) determining a required time period for performing a retrying type of reading or writing of the data (column 7, lines 20-25); (B) terminating retrying of reading or writing of the data if the required time period is greater than a remaining retrying limitation time (column 7, lines 32-37); determining whether the data is a predetermined type of data (column 7, lines 44-52) and performing the steps A and B if the data is the predetermined type of data (“N” branch at “step 218” in Fig. 6); wherein a same order of retry types is followed (column 6, lines 18-25; column 7, lines 25-30; Fig. 5; Fig. 6) according to a retry table for both when the data is the predetermined type and when the data is not the predetermined type (abstract).

One of ordinary skill in the art at the time the invention was made would have been motivated to modify the teachings of Ito et al. by having the reading or writing of the predetermined type of data retried as disclosed by Hirata et al. instead of having the retrying process omitted (Ito et al., [0015]) so that when it is determined that the type of data is AV data, retrying process is also performed (see "Response to Arguments" above). The modified feature would also enhance the recordability or readability of the predetermined type of data even in case of errors.

Regarding claim 3, Hirata et al. also disclose determining whether an error has occurred during an initial reading or writing of the data or during a prior retry of reading or writing of the data; and performing steps (A) and (B) if said error has occurred (column 7, lines 15-30).

Regarding claim 5, Hirata et al. also disclose the predetermined type of data is A/V (audio or video) data (column 8, lines 45-50).

Regarding claim 8, Hirata et al. also disclose performing a retry of reading or writing the data for the retrying type if the required time period is not greater than the remaining retrying limitation time (column 7, lines 25-30).

Regarding claim 9, see the teachings of Ito et al. and Hirata et al. as discussed in claim 1 above. Further, Hirata et al. also disclose the data is read or written within a magnetic disc drive (Fig. 2). However, the proposed combination of Ito et al. and Hirata et al. does not disclose the magnetic disk drive to be a hard disk drive.

It is noted that hard disk drives are very well known in the art at the time of invention. Thus, Official Notice is taken.

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the hard disk drive into the method disclosed by Hirata et al. because of hard disk drives' large capacity and small access time.

Claim 12 is rejected for the same reason as discussed in claim 1 above.

Claim 14 is rejected for the same reason as discussed in claim 3 above.

Claim 16 is rejected for the same reason as discussed in claim 5 above.

Claim 19 is rejected for the same reason as discussed in claim 8 above.

Claim 20 is rejected for the same reason as discussed in claim 9 above.

Claims 2 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al. (US 2001/0038704) and Hirata et al. (US 6,625,755) as applied to claims 1, 3, 5, 8-9, 12, 14, 16, and 19-20 above, and further in view of Makita et al. (JP Application No. 10-138420 – reference will be made to a copy of its translation attached).

Regarding claim 2, see the teachings of Ito et al. and Hirata et al. as discussed in claim 1 above. However, the proposed combination of Ito et al. and Hirata et al. does not disclose starting to time down from the retrying limitation time after a request for reading or writing of the data is generated.

Makita et al. also disclose starting to time down from the retrying limitation time after a request for reading or writing of the data is generated ([0015]).

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the feature of timing down from the retrying limitation time

after a request for reading or writing of the data is generated as disclosed by Makita et al. into the method disclosed by Ito et al. and Hirata et al. as a choice of implementation.

Claim 13 is rejected for the same reason as discussed in claim 2 above.

Claims 7 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al. (US 2001/0038704) and Hirata et al. (US 6,625,755) as applied to claims 1, 3, 5, 8-9, 12, 14, 16, and 19-20 above, and further in view of Sato et al. (JP Application No. 09-217835 - reference will be made to a copy of its translation attached).

Regarding claim 7, see the teachings of Ito et al. and Hirata et al. as discussed in claim 1 above. Further, Hirata et al. also disclose determining the required time period for the retrying type of the lookup table (column 7, lines 21-23). However, the proposed combination of Ito et al. and Hirata et al. does not disclose determining the retrying type of reading or writing from a sequential order of retrying types as stored within a lookup table.

Sato et al. disclose determining the retrying type of reading or writing from a sequential order of retrying types as stored within a lookup table ([0007], [0008], [0009]).

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the steps of determining the retrying type of reading or writing and determining the required time period from a lookup table as disclosed by Sato et al. into the method disclosed by Ito et al. and Hirata et al. for efficiency reason (see Sato et al., [0009]).

Claim 18 is rejected for the same reason as discussed in claim 7 above.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Q. Dang whose telephone number is (571)270-1116. The examiner can normally be reached on IFT.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, THAI Q. TRAN can be reached on 571-272-7382. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hung Q Dang/
Examiner, Art Unit 2621